CLAIMS

What is claimed is:

1   1.   A system for recommending at least one media presentation event to a user,

2   comprising:

3   a recommendation system for generating a recommendation value for each of a plurality of

4   media presentation events, wherein each event is being presented at a particular time

5   on a particular channel;

6   a   Fuzzy-Now   function   recommendation   system   for   receiving   the   generated

7   recommendation values, for determining appropriate Fuzzy-Now functions to apply to

8   each recommendation value, for calculating a recommendation function for each event

9   by applying the appropriate Fuzzy-Now functions to the generated recommendation

10   value for said each event;

11   a personal schedule modification system for receiving the Fuzzy-Now recommendation

12   functions, for determining based on a personal schedule of a user if at least one

13   appropriate weighting factor needs to be applied to at least one received Fuzzy-Now

14   recommendation function, for applying the at least one appropriate weighting factor to

15   the at least one received Fuzzy-Now recommendation function if it is determined that

16   the at least one appropriate weighting factor needs to be applied to the at least one

17   received Fuzzy-Now recommendation function, for outputting appropriately weighted

18   Fuzzy-Now recommendation functions as final recommendation functions, and for

19   outputting unweighted Fuzzy-Now recommendation functions as final recommendation

20   functions, the unweighted Fuzzy-Now recommendation functions having been

21   determined not to need an appropriate weighting factor applied thereto; and

22   a selector for selecting at least one event as a recommended event based on an

23   instantaneous recommendation value of the recommended event at the request time,

24   said instantaneous recommendation value being of a final recommendation function of

25   the recommended event.

1   2.   The system as recited in claim 1, further comprising:

2   a personal schedule module for receiving schedule input, wherein schedule input is at least

3   one of direct input from the user and monitoring data, for storing and processing the

4   received schedule input, and for maintaining the personal schedule based on the stored

5   and processed schedule input.

1   3.   The system as recited in claim 2, wherein said personal schedule module, when the

2   schedule input is direct input from the user, comprises:

3   a means for storing the direct input from the user, said direct input comprising a

4   correlation between a user scheduling preference and one of at least one class of events

5   and at least one event;

6   a means for setting an appropriate weighting factor for a recommendation function of the

7   correlated one of at least one class of events and at least one event, wherein the

8   appropriate weighting factor being based upon the user scheduling preference; and

9   a means for supplying the personal schedule modification system with the appropriate

10   weighting factor when said correlation is recognized.

1   4.   The system as recited in claim 3, wherein the at least one class of events is

2 grouped by at least one of media programming type, genre, starting time of event, ending time of

3 event, and time length of event.

1   5.   The system as recited in claim 3, wherein the personal schedule modification

2 system comprises:

3   a means for recognizing circumstances fitting the user scheduling preference, said

4   recognizing being performed in order to determine if the set appropriate weighting

5   factor needs to be applied to the recommendation function of the correlated one of at

6   least one class of events and at least one event.

1   6.   The system as recited in claim 3, wherein the user scheduling preference is turning

2 off a media output device at bedtime; the correlated one of at least one class of events and at least

3 one event is a class of events which overlap in time with the bedtime; and the appropriate

4   weighting factor for recommendation functions of the correlated class of events is set so as to

5   decrease the recommendation functions of the correlated class of events.

1   7.   The system as recited in claim 2, wherein said personal schedule module, when the

2   schedule input is monitoring data, comprises:

3   a means for recording monitored user actions;

4   a means for detecting a correlation between recorded user actions and one of at least one

5   class of events and at least one event;

6   a means for setting a appropriate weighting factor for a recommendation function of the

7   correlated one of at least one class of events and at least one event, wherein the

8   appropriate weighting factor being based upon the detected correlation;

9   a means for recording the detected correlation in order to recognize said detected

10   correlation; and

11   a means for supplying the personal schedule modification system with the appropriate

12   weighting factor when said detected correlation is recognized.

1   8.   The system as recited in claim 7, wherein the at least one class of events is

2   grouped by at least one of media programming type, genre, starting time of event, ending time of

3   event, and time length of event.

1   9.   The system as recited in claim 7, wherein the personal schedule modification

2   system comprises:

3   a means for recognizing a recently monitored user action as fitting the recorded detected

4   correlation, said recognizing being performed in order to determine if the set

5   appropriate weighting factor needs to be applied to the recommendation function of the

6   correlated one of at least one class of events and at least one event.

1   10.   The system as recited in claim 7, wherein a detected correlation between the

2   recorded user actions of turning off a media output device at a similar time each night and a class

3   of events which overlap in time with the similar time results in an appropriate weighting factor for

4   recommendation functions of the correlated class of events being set so as to decrease the

5   recommendation functions of the correlated class of events.

1   11.   The system as recited in claim 1, wherein the at least one appropriate weighting

2   factor is applied by multiplying the at least one appropriate weighting factor by the at least one

3   received Fuzzy-Now recommendation function.

1   12.   The system as recited in claim 1, wherein the recommendation system is a three

2   way media recommendation system comprising:

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3   a feedback module for receiving direct event feedback from the user, for storing and

4   processing the received direct event feedback, and for generating a feedback module

5   recommendation based on the stored and processed direct event feedback, wherein the

6   direct event feedback comprises user-entered ranking of an event;

7   an implicit module for receiving background monitoring data, for storing and processing

8   the received background monitoring data, and for generating an implicit module

9   recommendation based on the stored and processed background monitoring data,

10   wherein the background monitoring data comprises data concerning which events are

11   presented to the user and when events are presented to the user;

12   an explicit rule module for receiving explicit rules from the user, for storing and

13   processing the received explicit rules, and for generating an explicit rule module

14   recommendation based on the stored and processed explicit rules, wherein an explicit

15   rule comprises a user-entered media programming preference; and

16   a combiner for receiving the feedback module recommendation, the implicit module

17   recommendation, and the explicit rule module recommendation, for combining the

18   received recommendations in order to generate a recommendation value.

1   13.   The system as recited in claim 1, wherein the Fuzzy-Now function

2 recommendation system comprises:

3   a Fuzzy-Now function profile module for receiving Fuzzy-Now function profile input,

4   wherein Fuzzy-Now function profile input is at least one of direct event feedback from

5   the user, background monitoring data, and explicit rules from the user, for storing and

6   processing the received Fuzzy-Now function profile input, and for generating a Fuzzy-

7   Now function for said each event based on the stored and processed Fuzzy-Now

8   function profile input.

1   14.   The system as recited in claim 1, further comprising:

2   a scheduling information source for providing a plurality of event schedules to the media

3   recommendation system, each of said event schedules being at least one event

4   presented on a channel over a time period;

5   at least one media source for supplying said each event;

6   a media output device for receiving at least one event and presenting said at least one

7   event to a user;

8   a receiver/tuner for tuning in a channel, for receiving at least one event over the tuned

9   channel from the at least one media source, and for providing the received at least one

10   event to the media output means;

11   a controller for directing the receiver/tuner, for directing the reception of the plurality of

12   event schedules from the scheduling information source, and for directing the creation

13   of an Electronic Programming Guide (EPG) Graphical User Interface (GUI) which

14   will be provided to an EPG GUI output means, said EPG GUI being created from the

15   plurality of event schedules; and

16   an EPG GUI output device for receiving and presenting the event selected by the selector

17   to the user.

1   15.   The system as recited in claim 14, wherein the at least one media source is at least

2   one of CATV system, an RF broadcast television system, the Internet, and a storage/playback

3   device.

1   16.   The system as recited in claim 14, wherein the receiver/tuner is at least one of a

2   AM/FM radio receiver, a digital radio receiver, a television UHF/VHF receiver, a digital

3   television receiver, a set-top box (STB), and a web browser.

1   17.   The system as recited in claim 14, wherein the media output device is one of a

2   television monitor, a speaker system, a holographic display, a screen on a PDA, and a screen on a

3   mobile terminal.

1   18.   A method for recommending at least one media presentation event to a user,

2   comprising the steps of:

3   generating a recommendation value for each of a plurality of media presentation events,

4   wherein each event is being presented at a particular time on a particular channel;

5   determining appropriate Fuzzy-Now functions to apply to each recommendation value;

6   calculating a recommendation function for each event by applying the appropriate Fuzzy-

7   Now functions to the generated recommendation value for said each event;

8   determining based on a personal schedule of a user if at least one appropriate weighting

9   factor needs to be applied to at least one Fuzzy-Now recommendation function;

10   applying the at least one appropriate weighting factor to the at least one Fuzzy-Now

11   recommendation function if it is determined that the at least one appropriate weighting

12   factor needs to be applied to the at least one Fuzzy-Now recommendation function;

13   outputting appropriately weighted Fuzzy-Now recommendation functions as final

14   recommendation functions;

15   outputting unweighted Fuzzy-Now recommendation functions as final recommendation

16   functions, the unweighted Fuzzy-Now recommendation functions having been

17   determined not to need an appropriate weighting factor applied; and

18   selecting at least one event as a recommended event based on an instantaneous

19   recommendation value of the recommended event at the request time, said

20   instantaneous recommendation value being of a final recommendation function of the

21   recommended event.

1   19.   The method as recited in claim 18, further comprising the steps of:

2   receiving schedule input, wherein schedule input is at least one of direct input from the

3   user and monitoring data;

4   storing and processing the received schedule input; and

5   maintaining the personal schedule based on the stored and processed schedule input.

1   20.   The method as recited in claim 19, wherein said step of storing and processing the

2   received schedule input comprises the steps of:

3   storing the direct input from the user, said direct input comprising a correlation between a

4   user scheduling preference and one of at least one class of events and at least one

5   event; and

6   setting an appropriate weighting factor for a recommendation function of the correlated

7   one of at least one class of events and at least one event, wherein the appropriate

8   weighting factor being based upon the user scheduling preference.

1   21.   The method as recited in claim 20, wherein the at least one class of events is

2   grouped by at least one of media programming type, genre, starting time of event, ending time of

3   event, and time length of event.

1   22.   The method as recited in claim 20, wherein the determining based on a personal

2   schedule if at least one appropriate weighting factor needs to be applied to at least one Fuzzy-Now

3   recommendation function comprises the step of:

4   recognizing circumstances fitting the user scheduling preference, said recognizing being

5   performed in order to determine if the set appropriate weighting factor needs to be

6   applied to the recommendation function of the correlated one of at least one class of

7   events and at least one event.

1   23.   The method as recited in claim 20, wherein the user scheduling preference is

2   turning off a media output device for presenting the media event at bedtime; the correlated one of

3   at least one class of events and at least one event is a class of events which overlap in time with

4   the bedtime; and the appropriate weighting factor for recommendation functions of the correlated

5   class of events is set so as to decrease the recommendation functions of the correlated class of

6   events.

1   24.   The method as recited in claim 19, wherein the schedule input is monitored user

2   actions, said step of storing and processing the received schedule input comprises the steps of:

3   recording the monitored user actions;

4   detecting a correlation between recorded user actions and one of at least one class of

5   events and at least one event;

6   setting a appropriate weighting factor for a recommendation function of the correlated one

7   of at least one class of events and at least one event, wherein the appropriate weighting

8   factor being based upon the detected correlation; and

9   storing the detected correlation in order to recognize said detected correlation..

1   25.   The method as recited in claim 24, wherein the at least one class of events is

2   grouped by at least one of media programming type, genre, starting time of event, ending time of

3   event, and time length of event.

1   26.   The method as recited in claim 24, wherein the determining based on a personal

2   schedule if at least one appropriate weighting factor needs to be applied to at least one Fuzzy-Now

3   recommendation function comprises the step of:

4   recognizing a recently monitored user action as fitting the recorded detected correlation,

5   said recognizing being performed in order to determine if the set appropriate weighting

6   factor needs to be applied to the recommendation function of the correlated one of at

7   least one class of events and at least one event.

1   27.   The method as recited in claim 24, wherein a detected correlation between the

2   recorded user actions of turning off a media output device for presenting the media event at a

3   similar time each night and a class of events which overlap in time with the similar time results in

4   an appropriate weighting factor for recommendation functions of the correlated class of events

5   being set so as to decrease the recommendation functions of the correlated class of events.

1   28.   The system as recited in claim 18, wherein the step of applying the at least one

2   appropriate weighting factor to the at least one Fuzzy-Now recommendation function comprises

3   the step of:

4   multiplying the at least one appropriate weighting factor by the at least one received

5   Fuzzy-Now recommendation function.

1   29.   The method as recited in claim 18, wherein the step of generating a

2   recommendation value comprises the steps of:

3   receiving and storing direct event feedback from the user, wherein the direct event

4   feedback comprises user-entered ranking of an event;

5   processing the received and stored direct event feedback in order to generate a feedback

6   profile recommendation based on the stored and processed direct event feedback;

7   receiving and storing background monitoring data, wherein the background monitoring

8   data comprises data concerning which events are presented to the user and when

9   events are presented to the user;

10   processing the received and stored background monitoring data in order to generate an

11   implicit profile recommendation;

12   receiving and storing explicit rules from the user, wherein an explicit rule comprises a

13   user media programming preference;

14   processing the received and stored explicit rules in order to generate an explicit rule

15   profile recommendation; and

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16   combining the feedback profile recommendation, the implicit profile recommendation, and

17   the explicit rule profile recommendation in order to generate the recommendation

18   value.